

## **CURRICULUM VITAE**

### **Personal Information:**

Charity N. Davis  
DNA Casework Unit  
FBI Laboratory  
2501 Investigation Parkway  
Quantico, VA 22135  
[REDACTED]

### **Education:**

- 2003            Doctor of Philosophy in the Program of Genetics and Molecular Biology  
Emory University, Atlanta, GA
- 1997            Bachelor of Science in Chemistry with a specialization in Biochemistry  
University of West Florida, Pensacola, FL

### **Professional Experience:**

- 2008-Present            Forensic Examiner  
DNA Casework Unit, FBI Laboratory, Quantico, VA
- 3/2008-9/2008            Assistant Technical Leader  
Forensic Biology Section, Division of Forensic Sciences, Georgia Bureau  
of Investigation, Decatur, GA
- 2004-2008            Crime Lab Scientist  
Forensic Biology Section, Division of Forensic Sciences, Georgia Bureau  
of Investigation, Decatur, GA
- 2003-2004            Post-Doctoral Associate/Fellow  
Department of Genetics, University of Georgia, Athens, GA
- 1995-1997            Laboratory Teaching Assistant  
Department of Chemistry, University of West Florida, Pensacola, FL

**Specialized Training and Continuing Education:**

2019	The Elements of DNA Profile Interpretation and Probabilistic Genotyping Forensic Technology Center of Excellence Webinar Series
2019	The YHRD Database- How it Works and How to Use it in Casework Promega Webinar
2018	24 <sup>th</sup> Annual CODIS Conference Norman, Oklahoma
2017	23 <sup>rd</sup> Annual CODIS Conference Norman, Oklahoma
2017	Likelihood Ratios in DNA Mixture Interpretation Steven Myers, California Department of Justice, Quantico, VA
2017	The 'next generation' of forensic DNA: educations, casework and Databasing Dr. Seth Faith, Quantico, VA
2017	NGS Data for Forensic Use Dr. Beth Shapiro, Quantico, VA
2017	Hybridization Capture applied to 4,000 year old Egyptian Mummy Quantico, VA
2017	Nuclear DNA Typing by Next Generation Sequencing Quantico, VA
2017	DNA Damage- Causes and Effects Quantico, VA
2016	22nd Annual CODIS Conference Norman, Oklahoma
2016	3500 Training Life Technologies, Quantico, VA
2015	21st Annual CODIS Conference Norman, Oklahoma
2015	STRmix™ Training Workshop John Buckleton and Jo-Anne Bright, Institute of Environmental Science and Research, Ltd., Quantico, Virginia

2015	Lean Six Sigma Green Belt Certification Sorenson Forensics: Heather Jamieson/Craig Nolde
2015	Kinship Analysis course California Criminalistics Institute, Richmond, CA
2014	National Institute of Standards and Technology Update NIST
2014	DNA Analyst Webinar Series NIST
2014	Error Rates and Low Template DNA Analysis Netherlands Forensic Institute Hosted by Federal Bureau of Investigation, Quantico, VA
2014	YSTR Training Federal Bureau of Investigation, Quantico, VA
2013	DNA Mixture Interpretation Workshop and Webinar NIST
2013	Qiagen Robotic Extraction Federal Bureau of Investigation, Quantico, VA
2013	65 <sup>th</sup> Annual Meeting of the American Academy of Forensic Sciences Washington, DC
2013	Forensic DNA Statistics Federal Bureau of Investigation, Quantico, VA
2012	GeneMapper ID-X Training Federal Bureau of Investigation, Quantico, VA
2012	SWGDM Conference Fredericksburg, VA
2011	YFiler Training Federal Bureau of Investigation, Quantico, VA
2011	Applied Biosystems HID Future Trends in Forensic DNA Technology Seminar series Washington, DC
2011	ASCLD/LAB-International Assessor Training Course

Sterling, VA

2010 SWGDAM Conference  
Fredericksburg, VA

2010 Introduction to Kin-Calc and Kinship Testing  
Federal Bureau of Investigation, Quantico, VA

2010 Forensic Science Services- Kinship Analysis Application  
Federal Bureau of Investigation, Quantico, VA

2010 DNA Quality Assurance Auditor Training  
Federal Bureau of Investigation

2010 Completed documented training program for Forensic Examiner  
Nuclear DNA Unit, Federal Bureau of Investigation, Quantico, VA

2010 Population Statistics and Forensic DNA Analysis  
Federal Bureau of Investigation, Quantico, VA

2010 SWGDAM Conference  
Fredericksburg, VA

2009 20<sup>th</sup> Annual International Symposium on Human Identification  
Promega, Las Vegas, NV

2009 SWGDAM Conference  
Fredericksburg, VA

2008 ISO 17025 Internal Auditor Training  
SAI Global, Georgia Bureau of Investigation, Decatur, GA

2007 18<sup>th</sup> Annual International Symposium on Human Identification  
Promega, Los Angeles, CA

2007 Future Trends in Forensic DNA Technology Seminar Series  
Applied Biosystems, Atlanta, GA

2007 ABI Prism 3100/ Applied Biosystems 3130 Genetic Analyzer HID  
Systems Training Program  
ABI, Rockville, MD

2006 Completed documented training program for Blood Examination  
Forensic Biology Section, Division of Forensic Sciences, Georgia Bureau  
of Investigation, Decatur, GA

- 2006 DNA Quality Assurance Auditor Training  
Federal Bureau of Investigation, Plantation, FL
- 2005 President's DNA Initiative Workshop for Population Genetics and  
Statistics  
NFSTC, Largo, FL
- 2005 Completed documented training program for DNA Analysis  
Forensic Biology Section, Division of Forensic Sciences, Georgia Bureau  
of Investigation, Decatur, GA
- 2005 57<sup>th</sup> Annual Meeting of the American Academy of Forensic Sciences  
New Orleans, LA
- 2004 Completed documented training program for Semen Identification and  
Saliva Analysis  
Forensic Biology Section, Division of Forensic Sciences, Georgia Bureau  
of Investigation, Decatur, GA

**Publications:**

Topcu, Z., Nickles, K., **Davis, C.** and McEachern, M.J. (2005) "Abrupt disruption of capping and a single source for recombinationally elongated telomeres in *Kluyveromyces lactis*." Proceedings of the National Academy of Sciences. 102(9): 3348-53.

Ross, K.L., **Davis, C.N.** and Fridovich-Keil, J.L. (2004) "Differential roles of the Leloir Pathway enzymes and metabolites in defining galactose sensitivity in yeast." Molecular Genetics and Metabolism 83(1-2): 103-16.

Riehman, K., **Crews, C.** and Fridovich-Keil, J.L. (2000) "Relationship between genotype, activity, and galactose sensitivity in yeast expressing patient alleles of human galactose-1-phosphate uridylyltransferase." Journal of Biological Chemistry 276(14): 10634-40  
**NOTE:** The first two authors contributed equally to this work and should be considered as co-first authors.

**Crews, C.**, Wilkinson, K.D., Wells, L., Perkins, C. and Fridovich-Keil, J.L. (2000) "Functional consequence of substitutions at residue 171 in human galactose-1-phosphate uridylyltransferase." Journal of Biological Chemistry 275(30):22847-53.

**Presentations:**

Forensic Serology and DNA, ERT Advanced Training, April 2010

Introductory Training Seminar on Forensic DNA Analysis. Ithaca Police Department, Ithaca, NY, September 2009

Forensic DNA Testing. Lead America Conference, Baltimore MD, August 2009

Forensic Analysis of Sexual Assault Kits. Course for Advanced Child Abuse Cases, Children's Healthcare of Atlanta, Atlanta, GA, October 2007 and April 2008

Sexual Assault Kit Screening Using Quantifiler Y Human Male DNA Quantification Kit. Future Trends in Forensic DNA Technology Seminar Series, Applied Biosystems, Atlanta, GA August 2007

### **Testimony Experience**

Queen v. Castillo and others  
Belize 2019

US v. Cloud  
Yakima, WA 2019

US v. Nicholson  
Birmingham, AL 2018

US v. Salemme et al  
Boston, MA 2018

US v. LaPointe  
Omaha, NE 2018

State v. Wood  
Springfield, MO 2017

State v. McCarty  
Leakesville, MS 2017

US v. Jett et al  
Indianapolis, IN 2017

State v. Wigfall  
Prince George's County, MD 2017

US v. Lewis  
Panama City, FL 2016

US v. Bartley  
Clarksburg, WF 2016

US v Buckles  
Great Falls, MT 2015

US v. Wright and Wilson  
Chicago, IL 2015

US v. Murray  
Dallas, TX 2015

US v. Swain  
Savannah, GA 2015

US v. Wright and Wilson  
Chicago, IL 2015

US V. Jones  
Winston-Salem, NC 2015

**Charity N. Davis**  
**Forensic Examiner**  
**DNA Casework Unit**  
**Federal Bureau of Investigation Laboratory**

### **Summary**

Since 2008, Charity N. Davis ("Davis") has worked in the DNA Casework Unit of the Federal Bureau of Investigation ("FBI") Laboratory. Davis has previously been qualified as an expert in federal and state courts, and has previously testified on approximately 86 occasions. Davis's opinions are based on her personal interpretation of results obtained from items submitted to the FBI Laboratory, as well as her training, education, experience, and expertise as a Forensic Examiner in the DNA Casework Unit. Davis's expert forensic opinion, and the basis for those opinions, is set forth more fully in her reports.

At trial, Davis will describe/define forensic serology. Davis will describe how serological testing is performed at the FBI Laboratory. Davis will describe/define Deoxyribonucleic acid ("DNA.") Davis will testify as to where DNA is found and how DNA varies from person to person. Davis will testify as to the kinds of differences she examines in DNA, .i.e., short tandem repeats and provide an example. Davis will describe how DNA typing is performed at the FBI Laboratory. Davis will describe the possible outcomes of a DNA examination. Davis will testify as to how she determines the significance of a DNA match, i.e. likely ratios. Davis will testify how it is possible to identify a source of DNA. Davis will testify as to the standards of the FBI Laboratory, i.e. accredited, standards of scientific community, proficiency and competency tests. Davis will testify as to population frequency data.

In the instant case, Davis will testify that she received a listing of items and information which was used to determine the most appropriate examination methods(s). Davis determined which items should be tested. At her direction, exam plans were implemented. Those items designated by Davis as appropriate for testing for the presence of blood were submitted for serological examinations. Davis will testify that serological testing is used to identify the presence of blood. If blood is likely present, the color changes. Here, the samples which presumptively tested positive for blood include results of "blood indicated." Samples which presumptively and conclusively tested positive for blood include results of "blood present." All items were examined for the existence of bodily fluids known to contain DNA. Bodily fluids were put on a microscope slide, chemicals were added, and Davis reviewed and observed crystals. At Davis's direction, the samples were submitted for collection and extraction. This process involves cutting the swab head, placing such item in a tube, adding chemicals and heat, which removes DNA from cells. The quantification and amplification process proceeded. Quantification estimates how much DNA was extracted from the sample with the use of chemicals and robotic instrumentation. The amplification process is a copying process which copies specific regions of the DNA. The amplified DNA is then run through capillary electrophoresis. The data comes back to Davis to generate a DNA profile. The following items ("Physical Items") were tested to identify the presence of DNA and develop a profile if DNA was found:



Item No. <sup>1</sup>	Description	Result
4	Swab from steering wheel of 2007 Chevrolet Silverado	Male DNA present, originating from two individuals
5	Swab from exterior of driver side door of 2007 Chevrolet Silverado	No DNA present
6	Swab from gear shift of 2007 Chevrolet Silverado	Male DNA present, originating from two individuals
7	Swab from interior driver side door pull of 2007 Chevrolet Silverado	Male DNA present, originating from two individuals
9	Key fob located on ground near driver side door of 2007 Chevrolet Silverado	Male DNA present, originating from two individuals
12	Knife from floor of 2007 Chevrolet Silverado	Male DNA present, originating from two individuals
29	Swab from door panel of 2008 Chevrolet Silverado	Blood indicated and female DNA present, originating from one individual
30	Swab from door panel of 2008 Chevrolet Silverado	Blood indicated and female DNA present, originating from one individual
31	Swab from back of seat of 2008 Chevrolet Silverado	Blood indicated and DNA present (no sex type), originating from one individual
33	Jacket from seat of 2008 Chevrolet Silverado	Blood and female DNA present, originating from one individual
34	Pants from seat of 2008 Chevrolet Silverado	Blood and female DNA present, originating from one individual
36	Swab from steering wheel and gear shift of 2008 Chevrolet Silverado	Female DNA present, originating from one individual
39	Purse from seat of Chevrolet S10 Blazer	No blood detected. No DNA present.
45	Two swabs from path to game room at 5151 Medicine Valley Road	Blood and female DNA present, originating from one individual

<sup>1</sup> Item number refers to the item number designation at Bates 7630-7633; 7641-7652; and 4122-4126

46	Cigarette butt from top of pool table in game room at 5151 Medicine Valley Road (1)	Male DNA present, originating from two individuals
47	Cigarette butt from top of pool table in game room at 5151 Medicine Valley Road (2)	Male DNA present, originating from one individual
48	Two swabs from couch in game room at 5151 Medicine Valley Road	Blood indicated and female DNA present, originating from one individual
49	Two swabs from door in parking area at 5151 Medicine Valley Road	Blood indicated and female DNA present, originating from one individual
64	Ruger rifle, serial number 25985399, from canal	No DNA present

DNA profiles were also developed for the following individuals from DNA collected from buccal samples or dried blood samples ("Known Samples"):

1. Donovan Quinn Carter Cloud (Item 2)
2. J [REDACTED] V [REDACTED] (Item 14)
3. N [REDACTED] V [REDACTED] (Item 15)
4. James Dean Cloud (Item 16)
5. M [REDACTED] J [REDACTED] (Item 17)
6. J [REDACTED] R [REDACTED] C [REDACTED] (Item 50)
7. T [REDACTED] H [REDACTED] (Item 51)
8. C [REDACTED] E [REDACTED] (Item 52)
9. M [REDACTED] S [REDACTED] (Item 53)
10. D [REDACTED] O [REDACTED] (Item 54)

Davis reviewed the data. For each sample, Davis conducted a side by side comparison of the DNA collected from Known Sample(s) to the samples taken from the above listed Physical Items.

Davis will testify that that her analysis and testing produced the following results<sup>2</sup>:

Physical Item No.	Description	Individual(s)' DNA Present
4	Swab from interior driver side door pull of 2007 Chevrolet Silverado	J [REDACTED] V [REDACTED] <sup>3</sup> ; James Cloud (limited support)

<sup>2</sup> Negative or exclusionary results not included here, but included in Davis's reports at Bates 7630-7633; 7641-7652; and 4122-4126.

<sup>3</sup> Presence of J [REDACTED] V [REDACTED]'s DNA was assumed for testing purposes.

6.	Key fob located on ground near driver side door of 2007 Chevrolet Silverado	J [REDACTED] V [REDACTED] <sup>4</sup> ; C [REDACTED] E [REDACTED] (limited support); M [REDACTED] S [REDACTED] (limited support)
7	Swab from door panel of 2008 Chevrolet Silverado	C [REDACTED] E [REDACTED]
9	Swab from door panel of 2008 Chevrolet Silverado	C [REDACTED] E [REDACTED]
29	Swab from back of seat of 2008 Chevrolet Silverado	C [REDACTED] E [REDACTED]
30	Jacket from seat of 2008 Chevrolet Silverado	C [REDACTED] E [REDACTED]
31	Pants from seat of 2008 Chevrolet Silverado	C [REDACTED] E [REDACTED]
33	Swab from steering wheel and gear shift of 2008 Chevrolet Silverado	C [REDACTED] E [REDACTED]
34	Two swabs from path to game room at 5151 Medicine Valley Road	M [REDACTED] S [REDACTED]
36	Cigarette butt from top of pool table in game room at 5151 Medicine Valley Road (1)	J [REDACTED] C [REDACTED]; Donovan Cloud
45	Cigarette butt from top of pool table in game room at 5151 Medicine Valley Road (2)	James Cloud
46	Two swabs from couch in game room at 5151 Medicine Valley Road	M [REDACTED] S [REDACTED]
47	Two swabs from door in parking area at 5151 Medicine Valley Road	C [REDACTED] E [REDACTED]

<sup>4</sup> Presence of John Verwey's DNA was assumed for testing purposes.